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ABSTRACT

In order to apply appropriate modes of instruction based on readers' learning characteristics, including modality preferences, the diagnostician must evaluate the reading abilities of the individual pupil on tests of word recognition, psycholinguistic abilities, and learning modes. The Dolch Basic Word Test is a tool for evaluating word recognition skills. This test should be augmented with a learning modalities test such as that developed by Mills which uses the visual, phonic or auditory, kinesthetic, and combination methods. Other learning modalities tests are the Gates Associative Tests and the Van-Wagenen "Word Learning" Test. Psycholinguistic tests such as the Illinois Test of Psycholinguistic Abilities and the Detroit Tests of Learning Aptitude are useful in diagnosing auditory and visual memory. Data collected from these evaluations may be used in determining the specific strengths and weaknesses of the individual pupil and in choosing appropriate teaching approaches and activities in teaching reading. References are included. (AL)

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Assessing "Word Learning" Modes and "Word Recognition"

by

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When desires to help pupils achieve more effectively in reading are manifest in schools at least two types of response are available for teachers:

1. Increase the amount of time or emphasis on reading instruction (quantity response)

2. Seek for variations in type of instructional procedures utilized (variety response)

These two types of responses are not mutually exclusive, because increased time may be required to allow for introducing new or different approaches. And when the "variety response" is used the base procedure may be similar, simply using an overlay of different materials, or the same approach may be employed under a new name or designation.

The thrust of the assessment of "word learning" modes calls for attention to the learner and utilization of his areas of competency which should lead toward responses aimed at helping that individual. This may necessitate selection of differing materials to aid the situation, but more of the same (quantity response) would not be viewed as appropriate.

When teachers and reading diagnosticians evaluate reading status and reading needs of pupils the results help to identify:

a. learners who will profit from instruction in the regular classroom setting.

b. those who need an adapted instructional program either in the classroom or in a small group situation.

c. those who need individual assistance in a clinical setting in order to learn to read effectively.

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It appears that the groupings are most often linked to the mode of learning which assessment indicates the learner is able to use effectively. Procedures which rely heavily on certain modalities may necessitate more specific learning settings (for example some kinesthetic and tactile approaches may be difficult, if not impossible, to implement in large groups).

When modes of learning can be applied more easily with groups or across a wider scope of situations then ability to succeed through this modality could provide for more immediate application and efficient use of instructional time. On the other hand, if an individual reveals evidence of being unable to profit from procedures that are easily applied, waste of time may be avoided by planning to use those specialized approaches which show more promise. In addition to "time waste," implications of pupil discouragement and development of negative responses would also be a factor for consideration. Furthermore, logic would lead one to believe that if a learner reveals preference or increased responsiveness for a single learning modality there might be individuals or situations that could call for combinations of learning modes as the approach of choice. Thus attention would need to be directed toward possible effective combinations.

McHugh (15) predicted in 1969 that the next five years might find teachers using any number of methods to teach reading according to the learning pattern that best fits an individual child. A child may of course be taught through one method or a combination of methods.

LEARNING MODALITIES

The learning modalities most frequently perceived as related to development of word recognition include visual, auditory, kinesthetic, and tactile. Various combinations of these modalities can be employed and differing degrees of emphasis may be given to each individually or in combination.

Interest in identifying learning modes has been evidenced since J. M. Charcot initiated the concept in 1886 indicating that each person has a preferred modality in learning. Charcot noted "audile, visile, and tactile learners". Thus, for 85 years, and perhaps longer, diagnosticians have attempted to ascertain the learning mode to which an individual will respond in order to facilitate the learning process.

Implications for more careful evaluation and implementation of modality teaching may also be inferred from work done by Holmes a decade ago. He presented the construct that:

> Substrata factors can be thought of as neurological memory systems composed of smaller subsystems ... containing various kinds of information, such as auditory, visual, and kinesthetic associations which ... bestow a sense of reality upon symbolically represented thought units. Such systems .... gain an interfacilitation, in Hebb's (1949) sense, when their mobilized cell-assemblies fire in phase. (9)

Some learners may need to be helped, in direct ways, to bring awareness from different subsets to bear on word identification and, of course, subsequent or simultaneous comprehension.

Reading diagnosticians are keenly aware that most instruments available for assessing reading are designed to measure status. Evidence yielded tends to reveal that an individual can correctly identify 183 words of 220 presented or similar scores. If a flash procedure is coupled with untimed exposure it may be possible to ascertain proportion of words with immediate recognition responses and also proportion that can be identified more slowly (by analysis). The status test is not designed to give clues regarding how the respondee recognized or identified the words or mastered them in terms of a learning mode. The value or significance of achievement status instruments is recognized for their contribution in establishing "independent" or "instructional" reading levels, for example. In fact efforts to construct tests relevant to the learning opportunities which have been and can be provided to the child are deemed essential. The work of Johnson (10) in calling attention to the 220 words with greatest frequency in the corpus used for the Kucera-Francis (12) list (1967) which includes 138 of the words on the Dolch Basic Sight Word List (circa 1930) is noteworthy. In 1961 Daniels (6) developed two Word Recognition Tests from his analysis of reading vocabulary at the primary levels. At the Reading Center at Ball State University efforts are made regularly to develop and revise word lists - a recent vocabulary study identified words occurring most frequently at levels pre-primer through sixth reader in seven basal reading series. (14). These lists presented here can be used as a word recognition check and have been constructed to reflect the very words which pupils have encountered or will encounter in actual "learning to read" situations today.

WORD RECOGNITION

Pre-primer	Primer	First Reader	Second Reader
1. and	1. out	1. over	1. while
2. for	2. went	2. could	2. most
3. a	3. run	3. street	3. through
4. not	4. too	4. were	4. great
5. get	5. ran	5. next	5. quiet
6. I	6. saw	6. as	6. winter
7. is	7. good	7. man	7. such
8. go	8. yes	8. time	8. been
9. play	9. but	9. sat	9. angry
10. can	10. she	10. when	10. else
11. you	11. fun	11. story	11. hungry
12. see	12. they	12. think	12. wrong
13. to	13. cake	13. four	13. always
14. the	14. all	14. again	14. clothes
15. said	15. then	15. lost	15. table
16. here	16. eat	16. sleep	16. breakfast
17. big	17. came	17. many	17. shall
18. up	18. white	18. an	18. week
19. mother	19. on	19. began	19. second
20. we	20. new	20. more	20. done

WORD RECOGNITION

Third Reader	Fourth Reader	Fifth Reader	Sixth Reader
1. several	1. courage	1. horizon	1. transparent
2. pasture	2. regular	2. panic	2. handicap
3. grain	3. shallow	3. ancient	3. opportunity
4. comfortable	4. strength	4. boulder	4. tremendous
5. sick	5. temperature	5. reputation	5. diameter
6. exclaimed	6. museum	6. glaciers	6. alas
7. moment	7. pride	7. telegraph	7. crystal
8. distance	8. dignity	8. scorn	8. campaign
9. valley	9. platform	9. satisfied	9. gantry
10. meant	10. information	10. energy	10. awe
11. famous	11. purpose	11. bound	11. intense
12. disappeared	12. view	12. indignant	12. hearth
13. heart	13. future	13. tide	13. compound
14. course	14. tropical	14. noble	14. specimen
15. gathered	15. natural	15. rhythm	15. artificial
16. among	16. realize	16. swarmed	16. archaeologists
17. danger	17. bare	17. vision	17. delicate
18. worth	18. mysterious	18. education	18. geological
19. pleasant	19. demanded	19. sturdy	19. moisture
20. half	20. disgrace	20. emergency	20. cylinder

Individuals and groups concerned with reading diagnosis in centers across the nation follow similar procedures in developing word recognition lists.

A continuing need exists to refine and update instruments which provide evidence of reading levels using both criterion-referenced and norm-referenced tasks. However, the need to augment these with instruments designed to identify preferred learning modes should be recognized.

LEARNING METHODS

Since instruments aimed at giving comparative data on modes of learning are limited, initial attention might be directed toward the Learning Methods Test developed by Mills in the 1950's. This test was aimed at determining response of pupils to specified teaching methods which provide for emphasis to a designated teaching procedure. Rather than isolating a specific learning modality for consideration the "methods" employed by Mills tend to involve several learning avenues with increased attention to one and avoidance of certain specific procedures. Mills notes in his Manual of Directions (17) that there is no pure method or approach to the teaching of word recognition. All words have visual, phonic and kinesthetic elements which cannot be divorced completely from each other. When Mills speaks of the phonic method, he means that stress is given to the auditory characteristics of the word, and this stress becomes the differential between that and other various methods.

The four learning (or teaching) methods used in the Mills Learning Methods Test are:

1. The Visual Method
2. The Phonic or Auditory Method
3. The Kinesthetic or Tracing Method
4. The Combination Method

Mills (16) concluded from his studies in developing and using his instrument that efforts to find a single best method to serve all pupils are inappropriate. He calls for matching the method with the learner. And this matching appears to be a challenge!

Coleman (4) reported from results of using of the Mills Test with underachievers that as a group his population learned as effectively by one method as another. Individuals did differ!

Cooper (5) adapted the procedure from the Learning Methods Test to use with nonsense syllables in studying the learning modalities of good and poor first grade readers. He concluded that modality preference appears to be an individual matter since no single learning method was superior for acquisition or retention for either good or poor readers. Modality preferences appeared to be more important for poor readers than for good readers.

ASSOCIATIVE LEARNING

A type of test which has been employed in identification of learning modalities which individuals use successfully is the Gates Associative Learning Tests. (8) This set of cards, developed by Gates in 1925 and used in diagnosis by persons like Kress and Berg (11) and others, provides evidence of competency in learning when only visual stimulation is supplied as well as when both visual and auditory means of stimulation are available. As part of his test, Gates provided cards with visual symbols of a geometric nature requiring gross visual discrimination and association clues; other sets of cards requiring associations of a more discriminative type were composed of what Gates described as "letterlike" characters which when combined in series resemble words.

When the Gates tests are administered in conjunction with the Van Wagenen "Word Learning" Test (18) where visual-auditory-kinesthetic (see-hear-say) stimulation is employed the diagnostician is able to combine evidence from two different tests to draw conclusions about preferred modalities. The individual who exhibits limitations in associating symbols with pictures when only visual stimulation is employed but shows improvement when visual and auditory (see and hear) avenues are employed may also show increased competency in word learning when he sees, hears, and says words. Such a pattern gives evidence for combining modalities to achieve effective learning.

The Van Wagenen test is devised from five Czechoslovakian words which the respondee is asked to learn by seeing, hearing and saying the English word represented. A set of cards recently developed (13) is based on ten words taken from the Atakapa language (American Indian). The first five of these cards can be employed in the same way as the Van Wagenen test and may be used separately. The full set of ten cards can form a more sophisticated learning task of 10 words to compare performance with the Gates Associative Learning cards.

AUDITORY AND VISUAL MEMORY

Profiles from the Illinois Test of Psycholinguistic Abilities (ITPA) and performance on specific subtests of automatic-sequential level functions provide evidence of variation in effectiveness of use of visual and auditory modalities. Bateman (2) reports a correlation with reading shown in several research studies and has used data from profiles in assigning pupils to be taught by an auditory or a visual method.

Selected subtests from the Detroit Tests of Learning Aptitude (1) have been utilized in identification of learner competencies in these areas. The "Auditory Attention Span for Unrelated Words" and for "Related Syllables" combined with performance on "Visual Attention Span for Objects" and for "Letters" yields comparative effectiveness through these learning avenues. Analysis of the total diagnostic data aids in making decisions regarding modality choices for instructional procedures.

Performance of pupils on most of these instruments point to advantages for learning which capitalizes on more than one modality. However, Blau and Blau, (3) who suggest a Non-Visual Auditory-Kinesthetic-Tactile method for some learners, would blindfold pupils for their A-K-T procedures (omitting the V for visual). They assert that there may be a number of children, classified as reluctant or non-learners, who really suffer from a kind of modality conflict and for whom instruction centering around modality blocking may be required for the amelioration of their difficulties.

Frostig (7) has questioned the integrating of stimuli from three or four sense modalities when the organism has difficulty even with the integration of two. Multisensory approaches, then, may not be recommended for some pupils.

UTILIZING DATA FROM ASSESSMENT

A vital step in aiding learners is the application of evidence regarding preferred modalities. Wepman (19) has observed that many children with learning problems appear to have greater facility in using one input pathway with considerably less facility along other pathways. According to Wepman the major importance of modality distinction lies in direction it may provide for assisting the underachiever.

Evidence secured regarding word recognition status and those learning modes providing maximum degree of success prove of little value if not applied in the teaching-learning situation. Actually, the performance on a battery of tests could be used as basis for selection of one of the teaching methods which Mills has described or modifications deemed appropriate for individuals. The major aim of diagnosing or assessing remains the securing of evidence to aid in making decisions to strengthen subsequent learning.

Diagnostic teaching, where the instructor continuously uses the response of the individual and performance level as basis for planning the next lesson in the diagnostic-teaching-learning spiral, appears to be a procedure which should be recommended. Level of word recognition can provide indication for a starting point, and modality preferences can offer guidelines for choosing teaching-learning procedures promising maximum effectiveness for individuals. Planning for the individual might restrict activities dependent almost exclusively on visual learning for the pupil who scores low in viewing and high when kinesthetic stimulation is provided. For such an individual repeated opportunities merely to see a word would be deemed inadequate. A plan for combining spelling with reading in a broad language arts framework might be employed so that the individual learns to write and spell correctly the words he is adding to his reading vocabulary. A variety of the word learning games include some kinesthetic elements along with visual and auditory exposure to words which can aid pupils who reveal this as preferred learning mode.

Learning activities and procedures can be devised which incorporate saying the word, or writing the word, or tracing the word. Directions for games can include requirements for pointing out correct response, for placing matching cards in proper juxtaposition, for getting body movement into the learning setting when pupils respond positively to an approach of this nature.

A special alertness may be demanded in the decade of the seventies as reading personnel are bombarded with technological advances involving programmed approaches, IPI, CAI, listen-and-read programs, etc. Some of these approaches appear to have promise but often focus on one "input channel" which needs to be matched with the learner-receiver. When multiple modalities are needed for successful achievement steps should be taken for multisensory exposure to new materials.

The need is for more accurate measurement of word recognition competency and better identification of preferred learning mode, followed by teaching-learning procedures matched to the individual on the basis of pattern of findings. These steps are significant not only because they lead to success but because success can help to strengthen positive self-concepts in terms of reading, and learning, and living.

BIBLIOGRAPHY

1. Baker, Harry J. and Leland, Bernice. Detroit Tests of Learning Aptitude. Indianapolis, Indiana: Bobbs-Merrill Company Inc., 1967.

2. Bateman, Barbara D. Interpretation of the 1961 Illinois Test of Psycholinguistic Abilities. Seattle, Washington: Special Child Publications, 1968.

3. Blau, Harold and Blau, Harriet. "A Theory of Learning to Read," The Reading Teacher, 22:126-129, November, 1968.

4. Coleman, James C. "Learning Method as a Relevant Subject Variable in Learning Disorders," Perceptual and Motor Skills, 14:263-269, 1962.

5. Cooper, J. David. "A Study of the Learning Modalities of Good and Poor First Grade Readers," unpublished Doctoral Dissertation, Indiana University, 1969.

6. Daniels, Paul R. "An Analysis of Primary Reading Vocabulary and the Development of Two Word Recognition Tests," unpublished Doctoral Dissertation, Temple University, 1961.

7. Frostig, Marianne. "Visual Modality - Research and Practice," in H. K. Smith (Ed.) Perception and Reading, Newark, Delaware: International Reading Association, 1968.

8. Gates, Arthur I. The Improvement of Reading. New York: The Macmillan Company, 1947.

9. Holmes, Jack A. and Singer, Harry. Speed and Power of Reading in High School. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1966.

10. Johnson, Dale D. "The Dolch List Re-examined," The Reading Teacher, 24:449-457, February, 1971.

11. Kress, Roy A. and Berg, Marjorie R. "Peter - A Case Study," in R. Kress (Ed.) That All May Learn to Read, Syracuse, N. Y.: Syracuse University, 1960.

12. Kucera, H. and Francis, W. N. Computational Analysis of Present-day American English. Providence, Rhode Island: Brown University Press, 1967.

13. Lumpkin, Donavon. Word Learning - Atakapa Cards. Muncie, Indiana: The Reading Center, Ball State University, 1971.

14. Lumpkin, Donavon. Word Recognition Check. Muncie, Indiana: The Reading Center, Ball State University, 1971.

15. McHugh, Walter J. "How Good Is Research in Reading?" in N. B. Smith (Ed.) Current Issues in Reading. Newark, Delaware: IRA, 1969.

16. Mills, Robert E. "An Evaluation of Techniques for Teaching Word Recognition," The Elementary School Journal, 56:221-225, 1956.

17. Mills, Robert E. The Teaching of Word Recognition Including the Manual of Directions for the Learning Methods Test. Fort Lauderdale, Florida: The Mills Center, 1964.

18. Van Wagenen, M. J. "Word Learning Test" in Van Wagenen Reading Readiness Scales. Minneapolis, Minnesota: Van Wagenen Psycho-Educational Research Laboratories, 1954.

19. Wepman, Joseph M. "The Modality Concept - Including a Statement of the Perceptual and Conceptual Levels of Learning," in H. K. Smith (Ed.) Perception and Reading. Newark, Delaware: IRA, 1968.